

Finding of No Significant Impact and Notice of Decision

For the Gypsy Moth Suppression Program, 2007

CATOCTIN MOUNTAIN PARK
NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR
THURMONT, MARYLAND

SUMMARY

In accordance with the provisions of the National Environmental Policy Act of 1969 (NEPA), the National Park Service (NPS) has prepared an Environmental Assessment (EA) for the Gypsy Moth Suppression Program for 2007 at Catoctin Mountain Park, a unit of the National Park Service, U.S. Department of the Interior.

This document presents both the Decision of Notice of the NPS selected alternative and the NPS determination, pursuant to the National Environmental Policy Act (NEPA), the Council of Environmental Quality regulations, and the NPS laws and policies that this selected alternative results in a Finding of No Significant Impact (FONSI). Based on analysis of the environmental effects, Catoctin Mountain Park's decision is to proceed with the preferred alternative, which is Alternative B: aerial application of *Btk* to 1339 acres.

BACKGROUND

The mission of the National Park Service at Catoctin Mountain Park is to serve as a public park for education, recreation and conservation and to provide a protected natural environment to serve as a buffer to Camp David, the Presidential Retreat. The purpose of this project is to control the gypsy moth (*Lymantria dispar*) population to prevent significant defoliation of the forest at Catoctin Mountain Park. Defoliation caused by gypsy moth caterpillars stresses and weakens trees leaving them more susceptible to secondary infections and infestations and other cumulative impacts. Direct and indirect stresses of gypsy moth infestation weaken and eventually kill some forest trees. This in turn would have adverse effects on water quality, wildlife and habitat, rare plants, visitor use and experience, safety, the cultural landscape, and wildland fire fuel load at Catoctin Mountain Park.

ALTERNATIVES CONSIDERED

As part of the environmental assessment process, the NPS explored a range of reasonable alternatives. The alternatives selected for full analysis in this environmental assessment fall within park management objectives and constraints as well as meet the purpose and need for action.

The selection of the site needing treatment is based on extensive gypsy moth biological information from current and previous seasons; consultation with the US Forest Service, NPS-National Capital Region Office, park personnel, and evaluation of gypsy moth suppression projects conducted previously. The technical discussions with professionals and presentations were the main technical sources relied upon to address the issues and concerns.

Alternative A: No Action

This alternative would allow gypsy moth populations to fluctuate naturally and be regulated only by natural processes. No action would likely result in total defoliation of individual trees, increase tree mortality, decreased recreational use due to larval nuisance and loss of shade, increased risk of transporting the gypsy moth to areas outside the identified infested area.

Alternative B: Aerial application of *Btk* to the Proposed Treatment Areas (Preferred alternative)

In this alternative, one application, or two if needed, of a commercial preparation of the microbial insecticide *Bacillus thuringiensis* variety *kurstaki* (*Btk*) would be applied by low-flying aircraft to 1339 acres). If needed, the second application would be made approximately seven days after the first to cover extended egg hatch and in order to expose any gypsy moth caterpillars that may have escaped or survived the first application.

Since *Btk* has been demonstrated to have very low toxicity to vertebrates the main concern is with the non-target invertebrates. The only organisms likely to be affected by *Btk* are Lepidoptera larvae feeding on plants (principally forest canopy leaves) within a few days of application. *Btk* does not affect adult insects.

Alternative C: Aerial application of gypsy moth nucleopolyhedrosis virus product (Gypchek) to the proposed treatment area.

In this alternative, one application of Gypchek, or two if needed, would be applied by low-flying aircraft to the proposed treatment block of approximately 1339 acres at an application rate of 4×10^{11} occlusion bodies in a total mix of one gallon per acre. The specific time would depend on weather conditions, but it is anticipated that the operation would begin in mid-May. Gypchek is less toxic and more species specific than *Btk*, but generally not as effective against heavy infestations of gypsy moth. Effectiveness of Gypchek treatment is also more sensitive to weather conditions than *Btk*.

ALTERNATIVES ELIMINATED FROM CONSIDERATION

Aerial application of diflubenzuron (Dimilin) to the proposed treatment area.

This alternative was ruled out because Diflubenzuron, a chitin inhibitor, affects all arthropods including aquatic species. It is an insect growth regulator that kills by interfering with the normal

development process (molting) of insects and some other related organisms (e.g., crustaceans). It can persist for a long time on leaf surfaces, beyond the time of gypsy moth activity. In the autumn, falling leaves can subsequently affect arthropod leaf litter communities, streams and wetlands. No human health risks are likely from exposure as used in gypsy moth projects. However at high exposures, some very rare potential human health risks could include changes in blood hemoglobin and carcinogenic effects (USDI, National Park Service, Cuyahoga Valley National Recreation Area, Final Environmental Assessment Gypsy Moth Suppression Program, 2000).

Other gypsy moth management strategies reviewed

Management strategies considered inappropriate or ineffective for gypsy moth suppression were not considered for use. These include introducing natural controls (e.g., fungal pathogens, parasitoids, and predators), removing and destroying egg masses, tree trunk bands, silvicultural techniques (selective removal of susceptible trees) and using insecticides other than diflubenzuron, *Btk* and Gypchek. Other strategies such as mass trapping, mating disruption, and sterile insect techniques were also not considered because these methods are effective only at very low egg mass densities (<10 egg masses per acre) and are recommended only for 'slow the spread' situations.

PUBLIC INVOLVEMENT

Catoctin Mountain Park emphasizes an ongoing communication with public and private organizations and agencies, public officials, and individuals. The Draft Environmental Assessment for the 2007 gypsy moth suppression program was made available for public review and comment on January 24, 2007. Notices of availability appeared in several local newspapers (Frederick News Post, Frederick Gazette, and Thurmont Times) and approximately 40 press releases were mailed to area media. The document was available at park headquarters, at Washington County Libraries (Hagerstown and Smithsburg) and Frederick County Libraries (Frederick and Thurmont), and online at the park's web site. Direct notification will be given to landowners in the immediate area of spraying at the time of treatment. Comments were accepted until February 26, 2007.

Decision

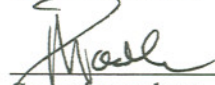
The NPS has selected Alternative B which involves aerial application of the microbial insecticide *Bacillus thuringiensis* variety *kurstaki* (*Btk*) to control gypsy moth on 1339 acres of Catoctin Mountain Park.

Impairment

There will be no impacts to cultural resources. Impacts to natural resources, including some other species of Lepidoptera, will be minimal. No species on the Federal List of Endangered and Threatened Species have been identified in Catoctin Mountain Park and there are no State listed species in the treatment areas. There are American Chestnut (*Castanea dentata*) tree sprouts present in the area of the proposed spray block. Fruiting American Chestnut is a State of Maryland watch-listed species. Treatment in the area of these trees would not be harmful to them, and in fact could be beneficial since the gypsy moth may feed on the foliage of these trees.

The National Park Service is prohibited from impairing park resources and values by the National Park Service Organic Act (16 USC 1). The impacts documented in the EA will not affect resources or values key to the natural or cultural integrity of the park or alter opportunities for enjoyment of the park. After reviewing the potential impacts, Alternative B, with the mitigations documented in the EA, will not impair park resources and will not violate the Organic Act of 1916.

Recommended:



Superintendent

Catoctin Mountain Park

3/7/07
Date

Approved:



Regional Director

National Capital Region

3/12/07
Date